



U.S. DEPARTMENT OF ENERGY

LOAN PROGRAMS OFFICE

INVESTING *in*
AMERICAN ENERGY

energy.gov/lpo



LPO PROGRAMS

\$40 BILLION IN REMAINING LOAN AUTHORITY

LPO investments accelerate the deployment of innovative clean energy projects and advanced vehicle manufacturing facilities in the United States



TITLE XVII

INNOVATIVE CLEAN ENERGY PROJECTS

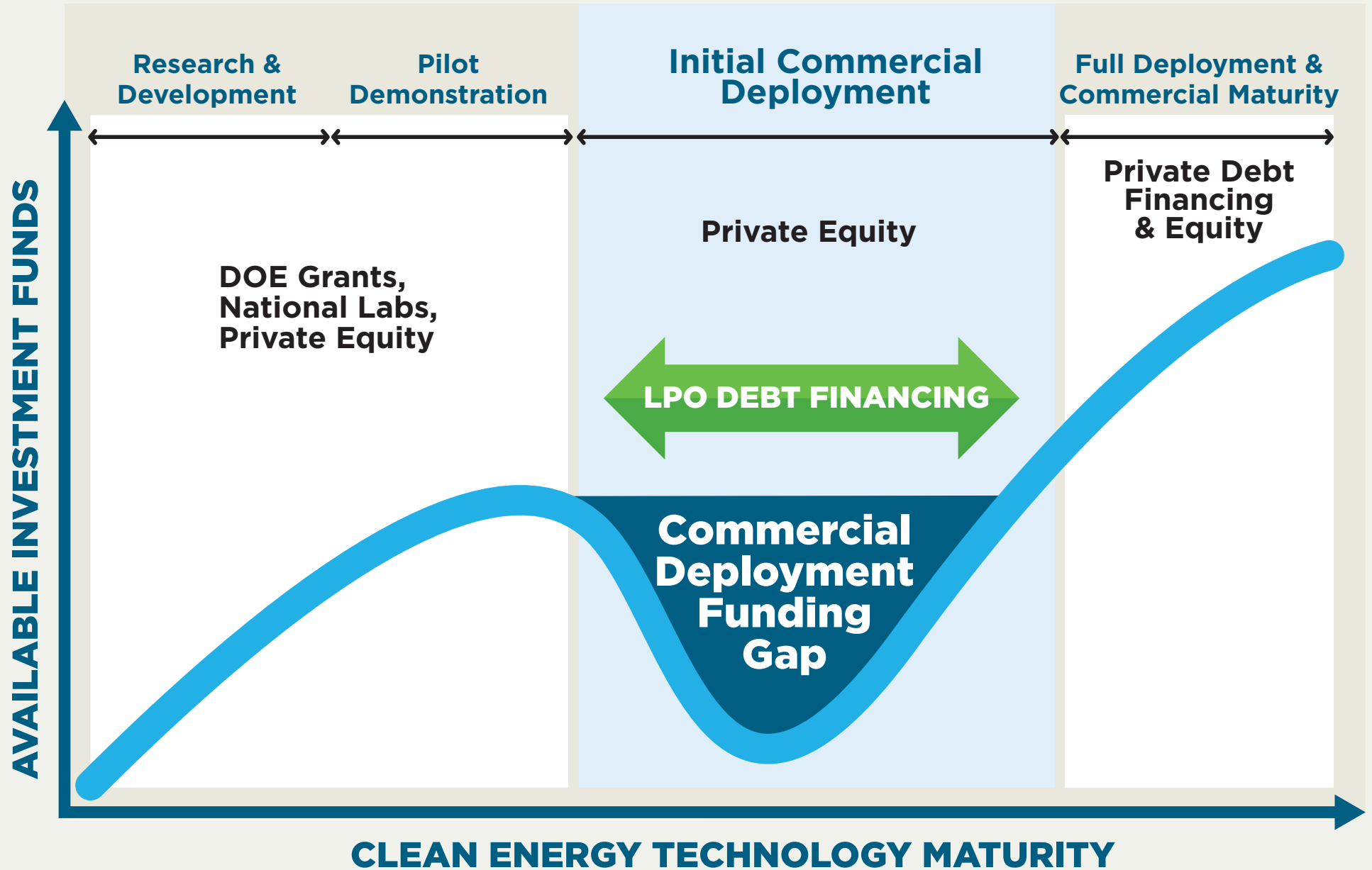
-  Loan guarantees
-  Applications accepted via scheduled solicitations

ATVM

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING

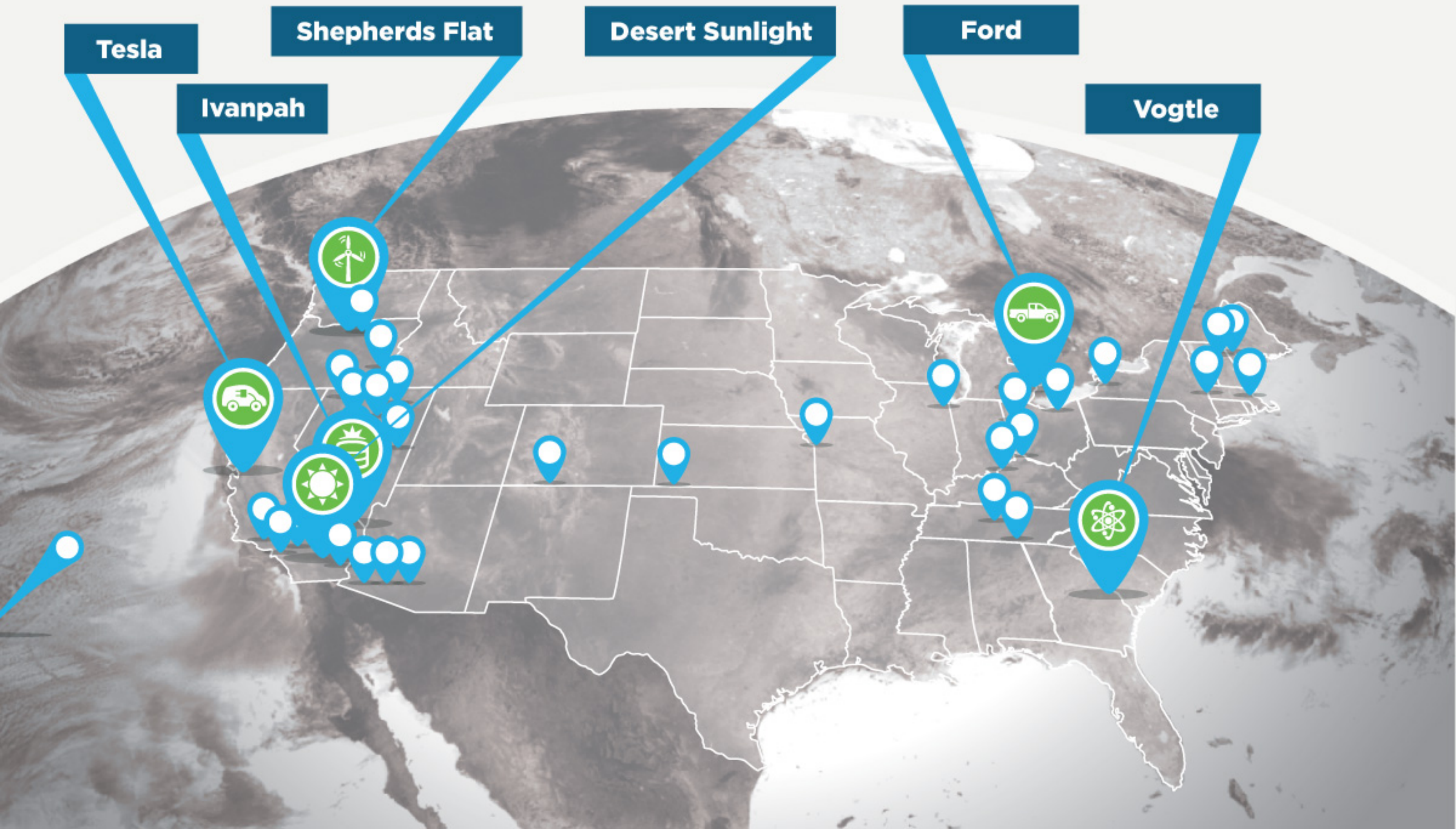
-  Direct loans
-  Applications accepted on a rolling basis

BRIDGING THE GAP



DEPLOYING INNOVATION

\$30 BILLION INVESTED IN MORE THAN 30 DIVERSE PROJECTS NATIONWIDE



LAUNCHING NEW MARKETS

UTILITY-SCALE PHOTOVOLTAICS U.S. PROJECTS >100MW

2010

0
PROJECTS

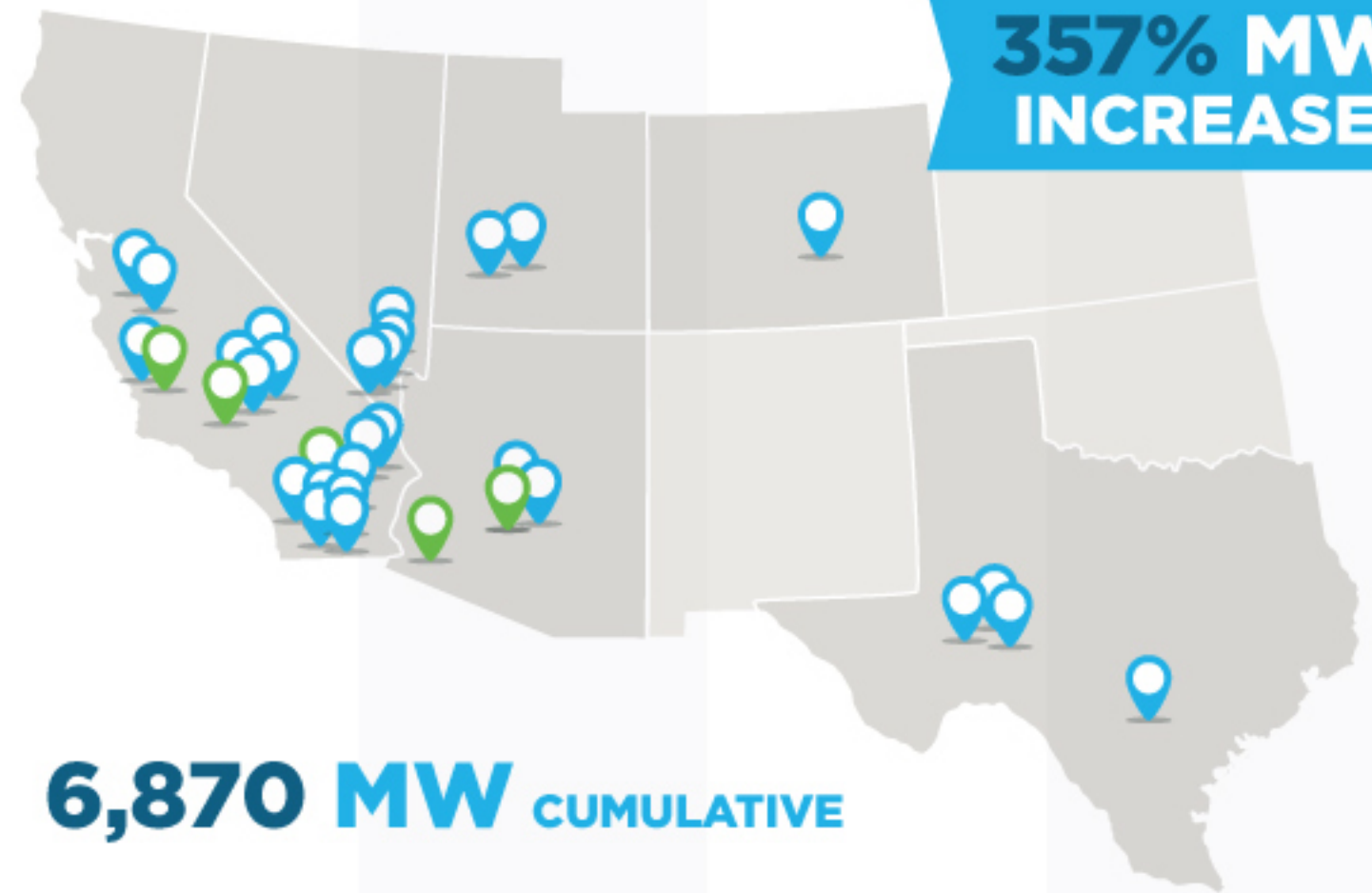
5
LPO PROJECTS
\$4.6 BILLION IN LOANS



1,502 MW

2012

28
PRIVATELY FINANCED PROJECTS

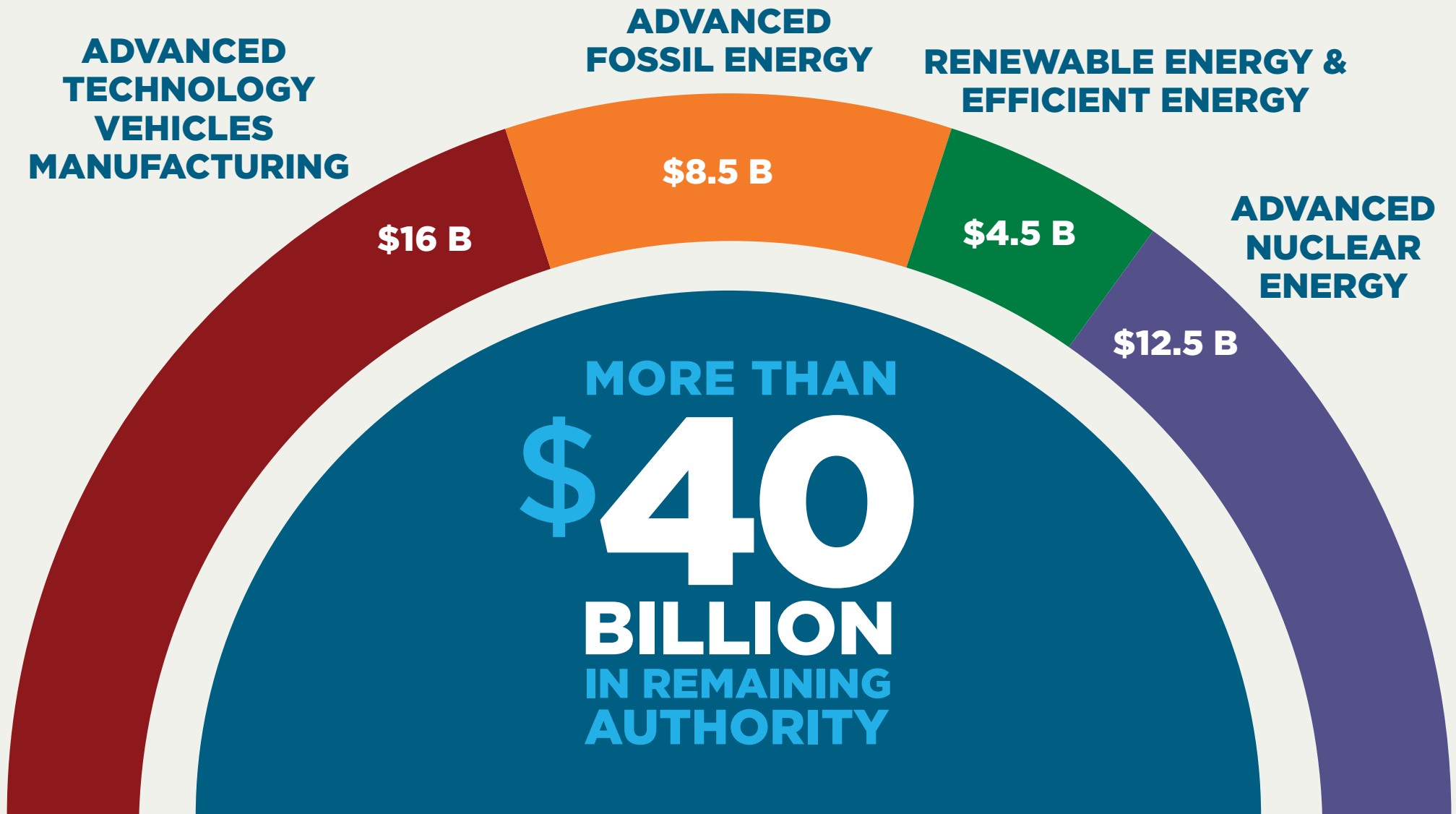


6,870 MW CUMULATIVE

1705 Program Ends

*MW Totals include projects operating or under construction

INNOVATION CONTINUES



AS OF OCTOBER 2015

FINANCIAL TERMS

TITLE XVII CLEAN ENERGY PROJECTS

LOAN GUARANTEE: A loan guarantee can support debt from a commercial lender or the U.S. Treasury

LOAN TENOR: Long-term financing is available based on the useful life of the asset – up to 30 years

INTEREST RATES: Interest rates set based on equivalent U.S. Treasury rate plus a credit-based spread (~0.5-1.5%)

EQUITY: LPO can only guarantee up to 80% of the total project cost. Most projects have at least 35% equity

CO-LENDING: Co-lending with commercial lenders is encouraged but not required

ELIGIBILITY REQUIREMENTS

TITLE XVII CLEAN ENERGY PROJECTS



INNOVATIVE TECHNOLOGY

Eligible projects must utilize new or significantly improved technology or systems



GREENHOUSE GAS BENEFITS

Eligible projects must reduce, avoid, or sequester greenhouse gases



LOCATED IN THE U.S.

Eligible projects must be located in the United States but may be foreign-owned



REASONABLE PROSPECT OF REPAYMENT

Eligible projects must be able to repay loan principal and interest. LPO conducts due diligence and underwrites each loan similar to a commercial lender



ADVANCED FOSSIL ENERGY

TECHNOLOGY AREAS OF INTEREST

Advanced Resource Development

- ⚡ Coal-bed methane recovery
- ⚡ Novel oil and gas drilling

Low Carbon Power Systems

- ⚡ Chemical looping or process that isolate fuel from air during combustion
- ⚡ Fuel cells which convert chemical energy into electricity without combustion

Carbon Capture

- ⚡ CO₂ capture from traditional coal or natural gas electricity generation
- ⚡ Permanent geologic storage or utilization in enhanced oil recovery (EOR)

Efficiency Improvements

- ⚡ Combined heat and power (CHP) and industrial waste recovery
- ⚡ High-efficiency distributed fossil power systems and microgrids

QUALIFYING PROJECTS ARE NOT LIMITED TO THESE TECHNOLOGIES.

RENEWABLE ENERGY & EFFICIENCY

TECHNOLOGY AREAS OF INTEREST

Advanced Grid Integration & Storage

- ⚡ Renewable energy generation, including distributed generation, incorporating storage
- ⚡ Smart grid systems incorporating demand response

Drop-in Biofuels

- ⚡ New bio-refineries or bio-crude refining processes
- ⚡ Modifications to existing ethanol facilities to produce drop-in molecules

Waste-to-Energy

- ⚡ Methane from landfills or ranches via biodigesters
- ⚡ Utilizing municipal solid waste, crop waste, or forestry waste

Enhancement of Existing Facilities

- ⚡ Powering non-powered dams or upgrading existing hydro facilities
- ⚡ Retrofitting existing renewable facilities with innovative technology (e.g. wind turbine retrofits)

Efficiency Improvements

- ⚡ Improve or reduce energy usage in residential, institutional, and commercial facilities, buildings, and/or processes
- ⚡ Recover, store, or dispatch waste energy or underutilized renewable energy sources


QUALIFYING PROJECTS ARE NOT LIMITED TO THESE TECHNOLOGIES.

DISTRIBUTED ENERGY PROJECTS

SUPPLEMENTAL GUIDANCE FOR:



Advanced Fossil Energy Projects SOLICITATION



Renewable Energy & Efficient Energy Projects SOLICITATION

- Comprised of installations of facilities utilizing a single technology, or a defined suite of technologies, at multiple sites, deployed pursuant to a master business plan.
- Must satisfy criteria of Title XVII, LPO regulations, and applicable solicitation.
- Access to financing under a single arrangement for multiple installations.
- Structures other than illustrations in supplements may exist or be developed.
- Solicitations do not involve a re-lending program.

ADVANCED NUCLEAR ENERGY

TECHNOLOGY AREAS OF INTEREST

Advanced Nuclear Reactors

- ⚡ Projects with state-of-the-art design improvements in fuel technology, thermal efficiency, modularized construction, and safety systems

Small Modular Reactors (SMRs)

- ⚡ Utilize standardized design and are nominally 300 MW or smaller in size
- ⚡ Projects have state-of-the-art design improvements

Upgrades and Upgrades at Existing Facilities

- ⚡ Improvements to an existing reactor to increase efficiency
- ⚡ Critical improvements that are requisite to current or future facility operation

Front-End Nuclear

- ⚡ Uranium conversion or enrichment
- ⚡ Nuclear fuel fabrication

QUALIFYING PROJECTS ARE NOT LIMITED TO THESE TECHNOLOGIES.

ADVANCED VEHICLE MANUFACTURING

TECHNOLOGY AREAS OF INTEREST

Advanced Technology Vehicles Manufacturing

- ⚡ Building new facilities in U.S.
- ⚡ Reequipping, modernizing, or expanding existing facilities in U.S.

Qualified Component Manufacturing

- ⚡ Building new facilities in U.S.
- ⚡ Reequipping, modernizing, or expanding existing facilities in U.S.

Engineering Integration

- ⚡ Engineering integration performed in U.S. for ATVs or qualifying components

QUALIFYING PROJECTS ARE NOT LIMITED TO THESE TECHNOLOGIES.

APPLICATION PROCESS

01

APPLICATION-PART I

- Determine basic eligibility
- \$50,000 fee (Fee does not apply to ATVM)

02

APPLICATION-PART II

- Confirmatory due diligence
- Balance of application fee (\$100,000/\$350,000)
(Fee does not apply to ATVM)

03

CONDITIONAL COMMITMENT

- Negotiate term sheet

04

LOAN GUARANTEE

- Negotiate final agreements
- Remaining fees

Apply at
energy.gov/lpo/apply



U.S. DEPARTMENT OF ENERGY

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